FIG. 1

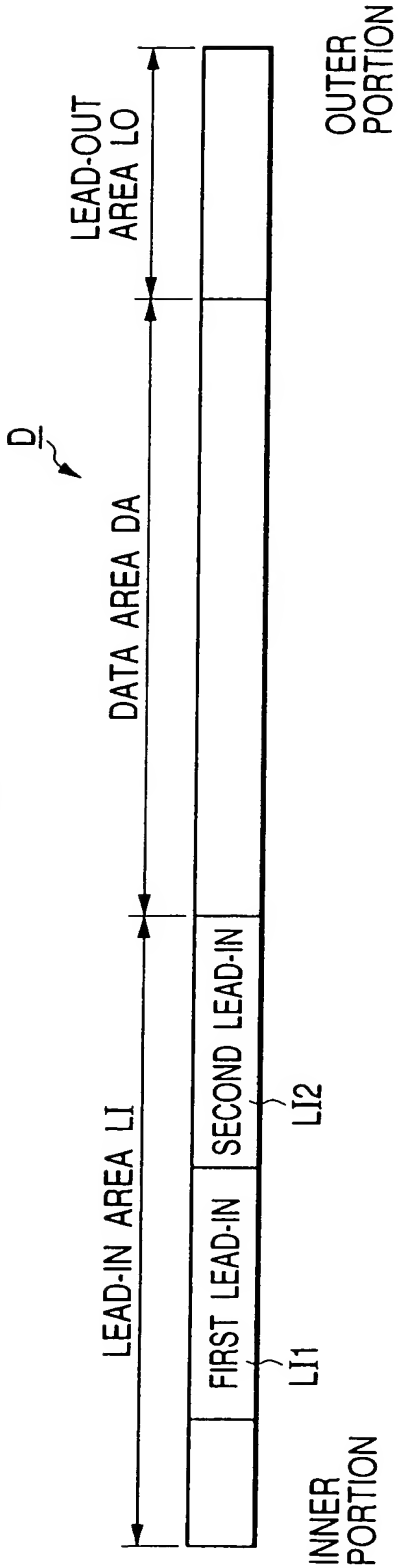

D
LEAD-OUT AREA LO
DATA AREA DA
OUTER PORTION
LEAD-IN AREA LI
FIRST LEAD-IN
SECOND LEAD-IN
LI1
LI2
INNER PORTION

FIG. 2

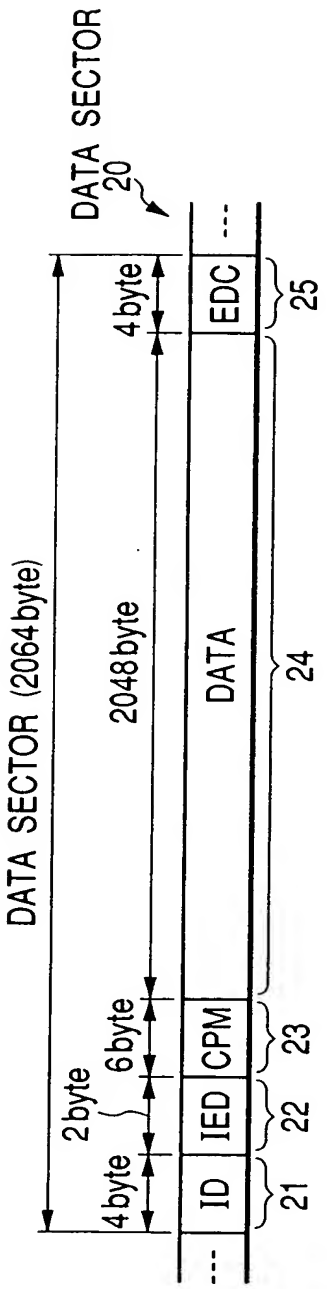
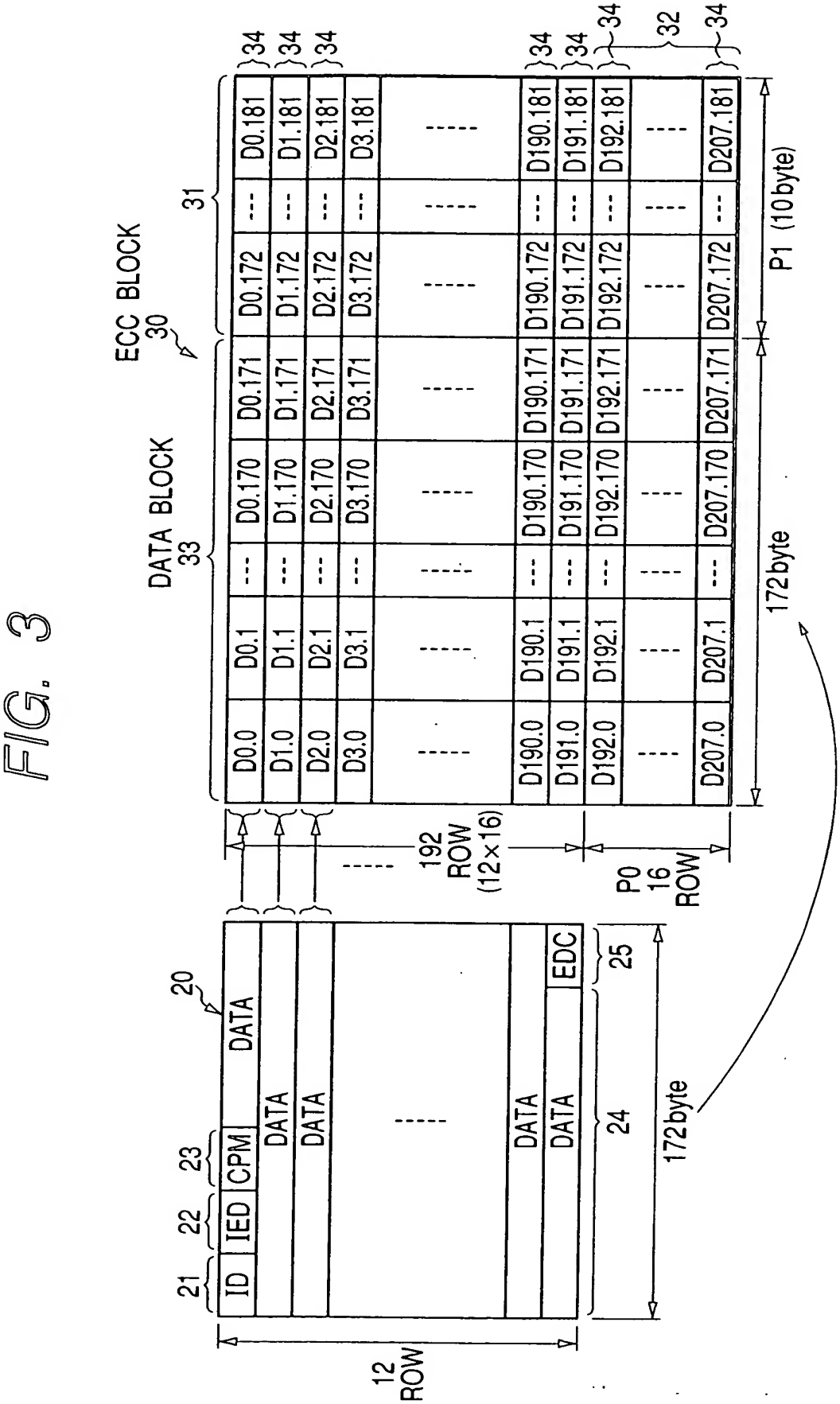

DATA SECTOR
20
DATA SECTOR (2064byte)
2048byte
4byte
EDC
25
2byte
6byte
4byte
ID
IED
CPM
DATA
21
22
23
24

FIG. 3


ECC BLOCK
30
DATA BLOCK
33
31
D0.0
D0.1

D0.170
D0.171
D0.172

D0.181
D1.0
D1.1

D1.170
D1.171
D1.172

D1.181
D2.0
D2.1

D2.170
D2.171
D2.172

D2.181
D3.0
D3.1

D3.170
D3.171
D3.172

D3.181
D190.0
D190.1

D190.170
D190.171
D190.172

D190.181
D191.0
D191.1

D191.170
D191.171
D191.172

D191.181
D192.0
D192.1

D192.170
D192.171
D192.172

D192.181
D207.0
D207.1

D207.170
D207.171
D207.172

D207.181
34
32
192 ROW (12×16)
P0 16 ROW
P1 (10byte)
172byte
20
21
22
23
ID
IED
CPM
DATA
EDC
12 ROW
24
25
172byte

FIG. 4

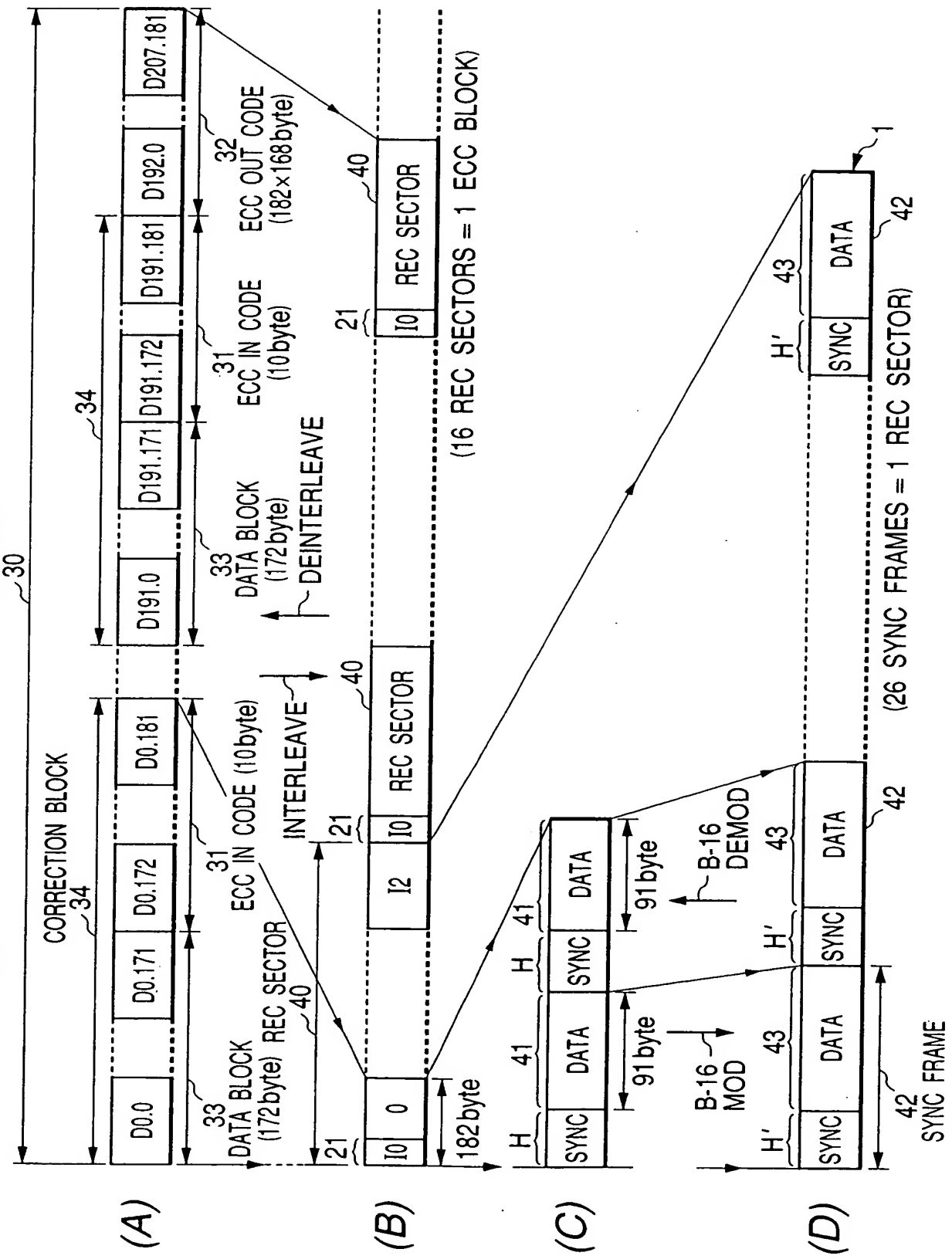

ECC BLOCK
30
CORRECTION BLOCK
34
D0.0
D0.171
D0.172
D0.181
D191.0
D191.171
D191.172
D191.181
D192.0
D207.181
33
DATA BLOCK (172byte)
31
ECC IN CODE (10byte)
32
ECC OUT CODE (182×168byte)
DEINTERLEAVE
INTERLEAVE
REC SECTOR
40
I0
I2
0
21
182byte
(16 REC SECTORS = 1 ECC BLOCK)
H
H'
SYNC
DATA
41
43
42
91byte
B-16 MOD
B-16 DEMOD
(26 SYNC FRAMES = 1 REC SECTOR)
SYNC FRAME
(A)
(B)
(C)
(D)

FIG. 5

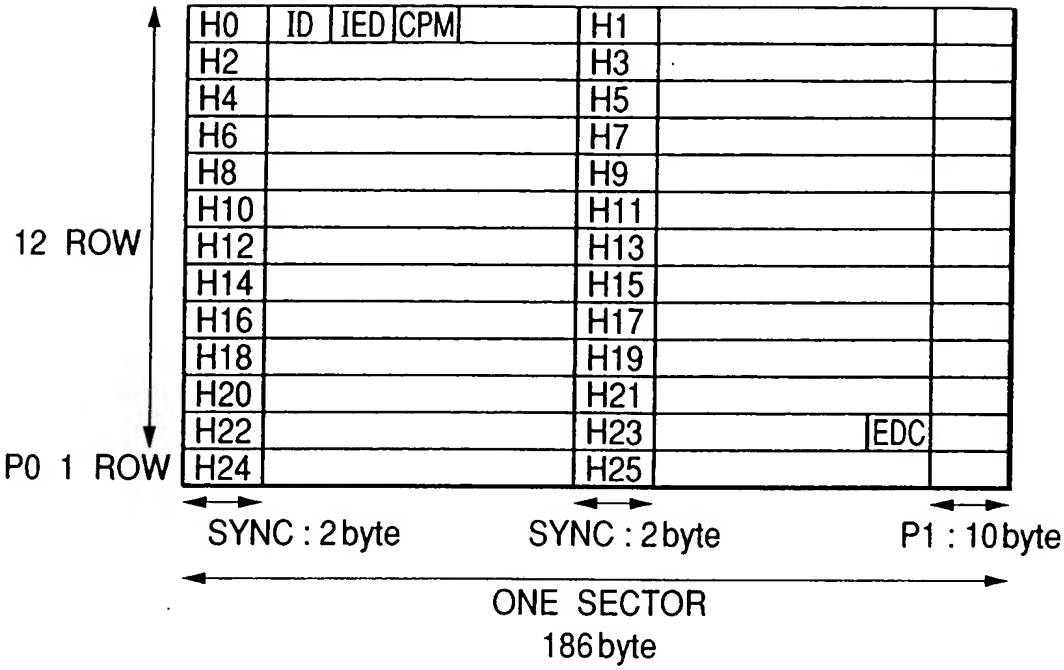

H0
ID
IED
CPM
H1
H2
H3
H4
H5
H6
H7
H8
H9
H10
H11
12 ROW
H12
H13
H14
H15
H16
H17
H18
H19
H20
H21
H22
H23
EDC
P0 1 ROW
H24
H25
SYNC : 2byte
SYNC : 2byte
P1 : 10byte
ONE SECTOR
186byte

FIG. 6

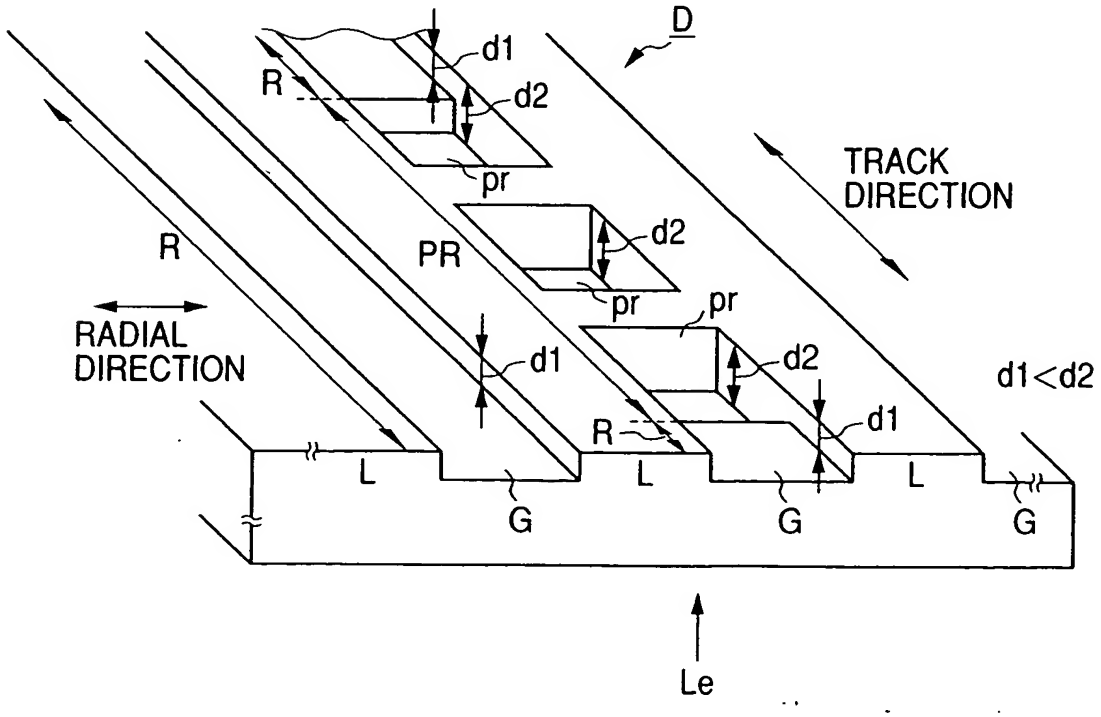

D
d1
R
d2
pr
TRACK
DIRECTION
R
PR
d2
pr
pr
RADIAL
DIRECTION
d1
d2
d1<d2
R
d1
L
L
L
G
G
G
Le

FIG. 7

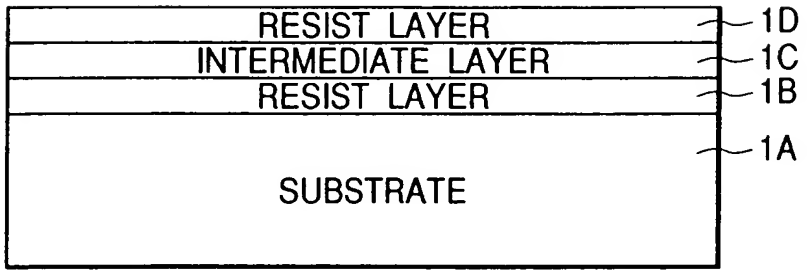

RESIST LAYER
INTERMEDIATE LAYER
RESIST LAYER
SUBSTRATE
1D
1C
1B
1A

FIG. 8

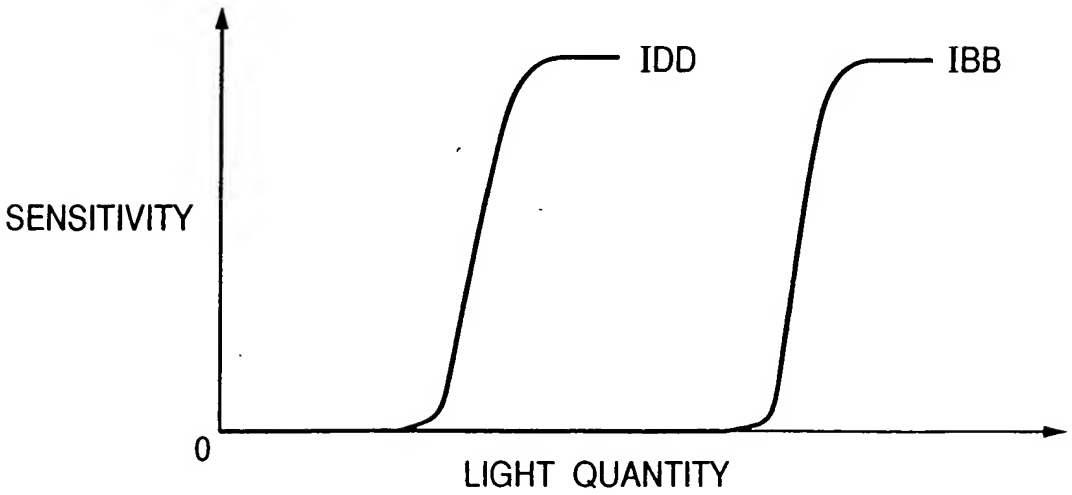

IDD
IBB
SENSITIVITY
0
LIGHT QUANTITY

FIG. 9

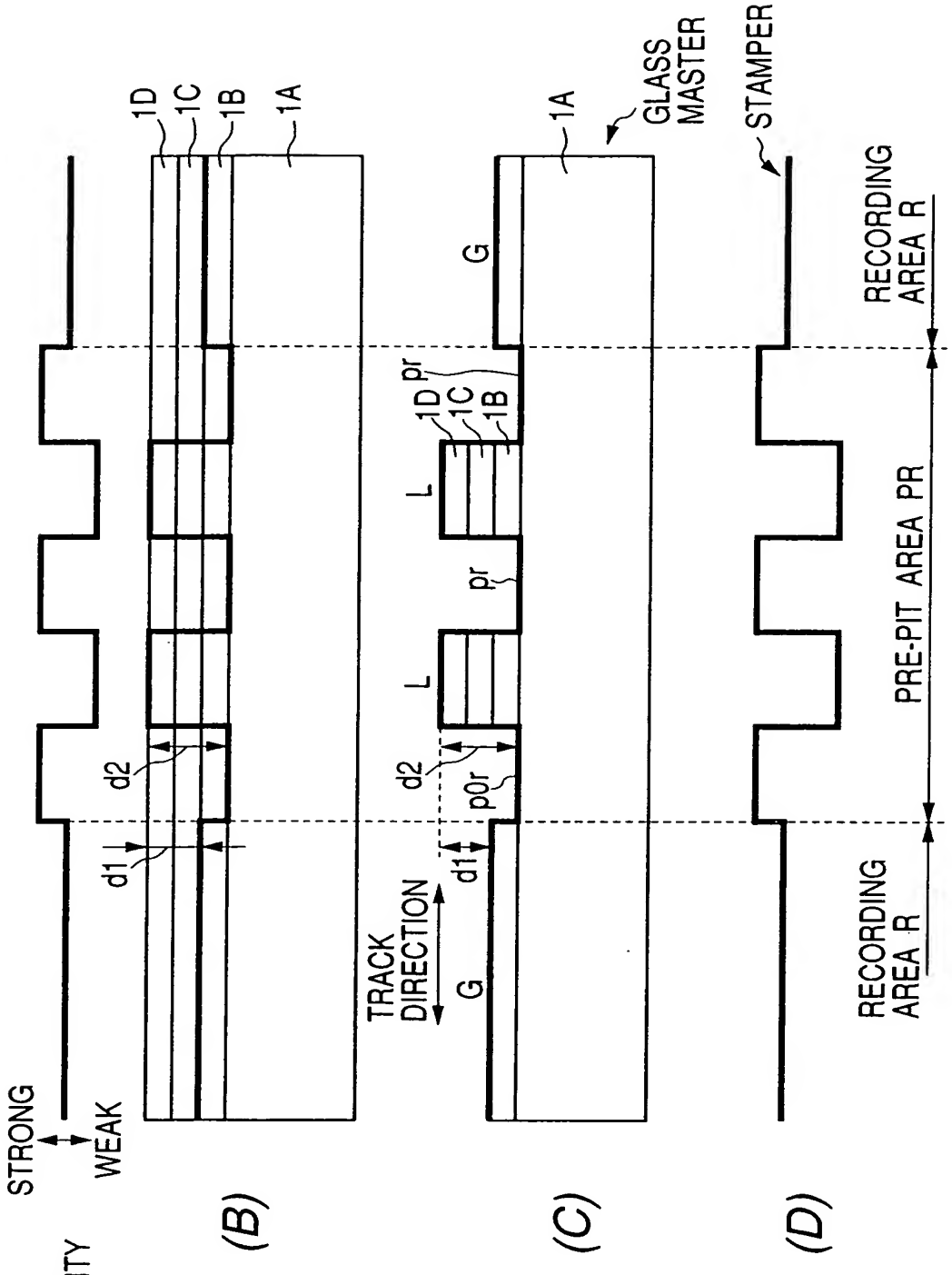

(A)
LIGHT INTENSITY
STRONG
WEAK
(B)
1D
1C
1B
1A
d2
d1
(C)
GLASS MASTER
1A
G
1D
1C
1B
pr
L
L
pr
d2
p0r
d1
TRACK DIRECTION
G
(D)
STAMPER
RECORDING AREA R
PRE-PIT AREA PR
RECORDING AREA R

FIG. 10

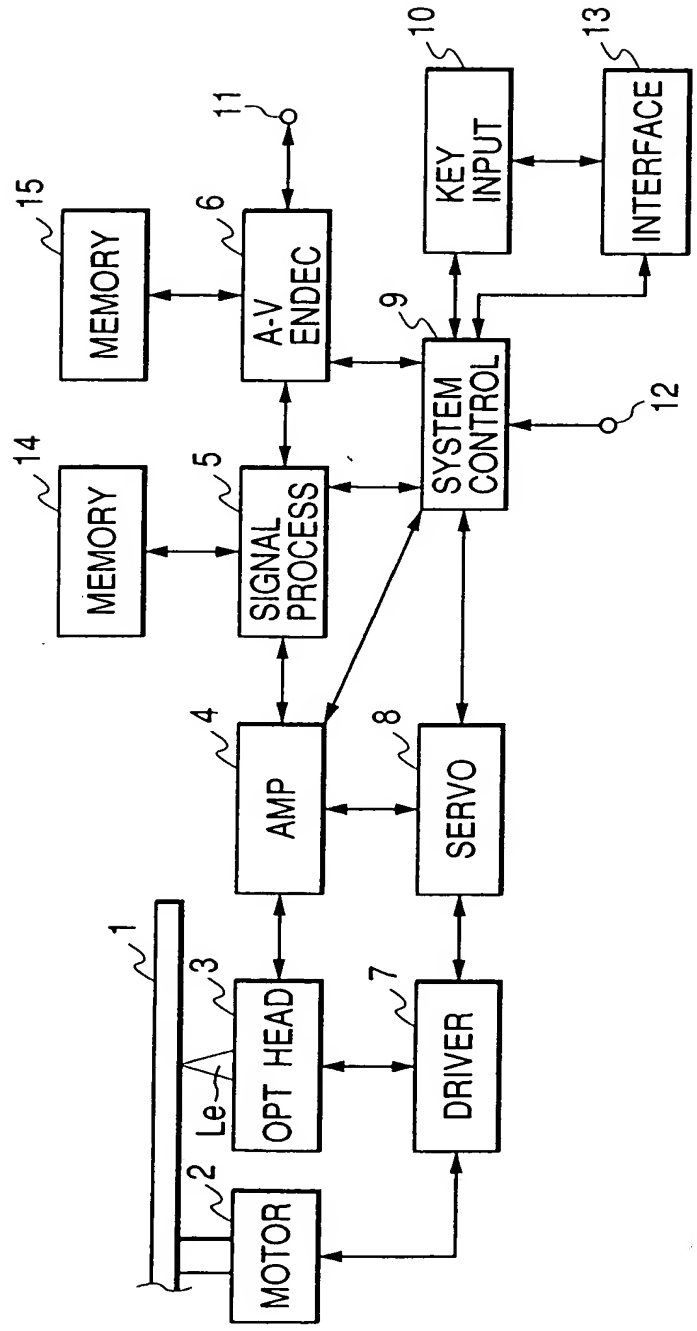

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
MOTOR
OPT HEAD
Le
AMP
SIGNAL PROCESS
A-V ENDEC
DRIVER
SERVO
SYSTEM CONTROL
KEY INPUT
INTERFACE
MEMORY
MEMORY

FIG. 11

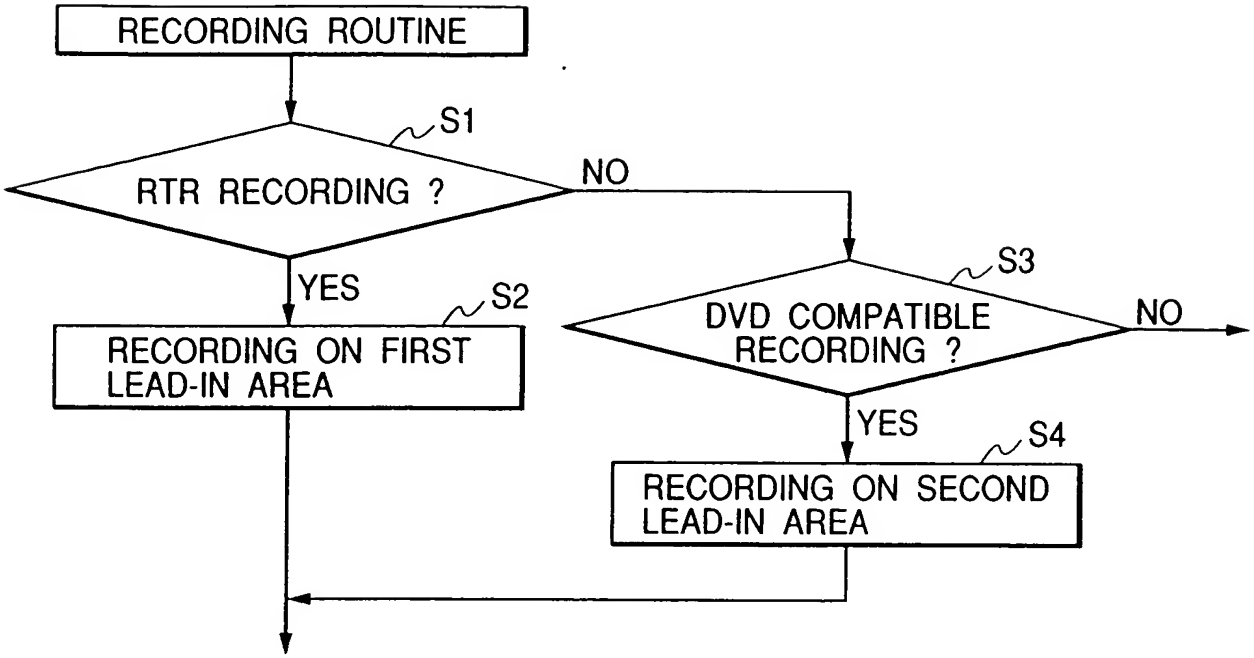

RECORDING ROUTINE
S1
RTR RECORDING ?
NO
YES
S2
RECORDING ON FIRST LEAD-IN AREA
S3
DVD COMPATIBLE RECORDING ?
NO
YES
S4
RECORDING ON SECOND LEAD-IN AREA

FIG. 12

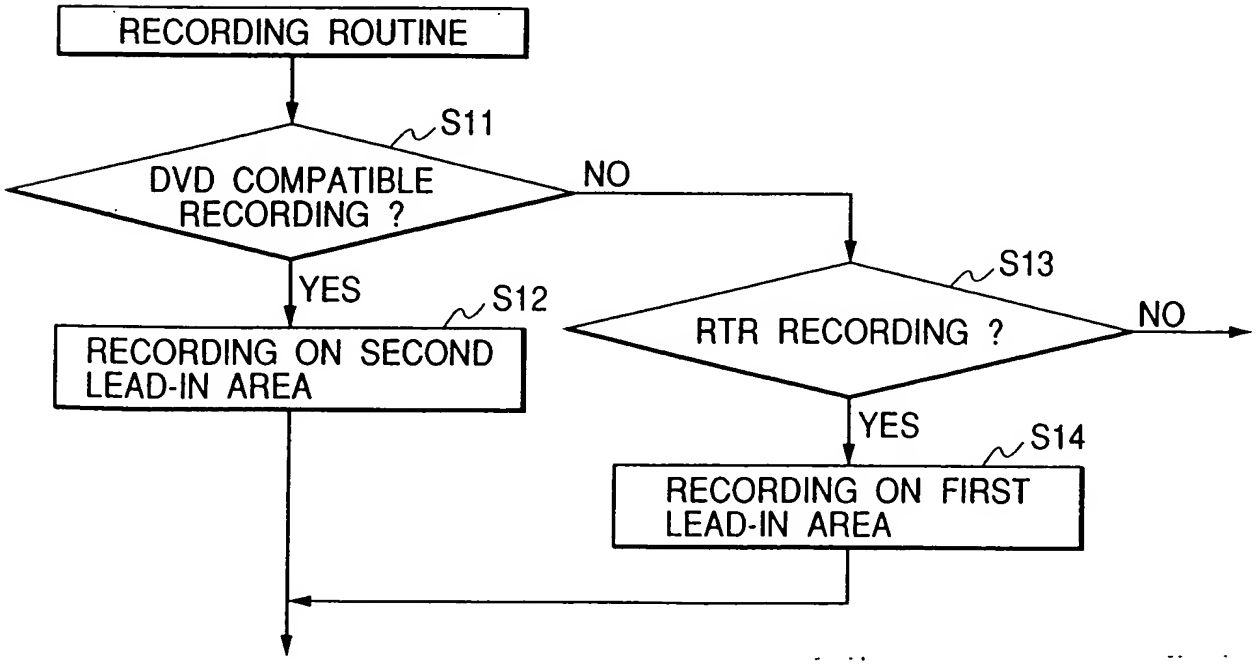

RECORDING ROUTINE
S11
DVD COMPATIBLE RECORDING ?
NO
YES
S12
RECORDING ON SECOND LEAD-IN AREA
S13
RTR RECORDING ?
NO
YES
S14
RECORDING ON FIRST LEAD-IN AREA

FIG. 13

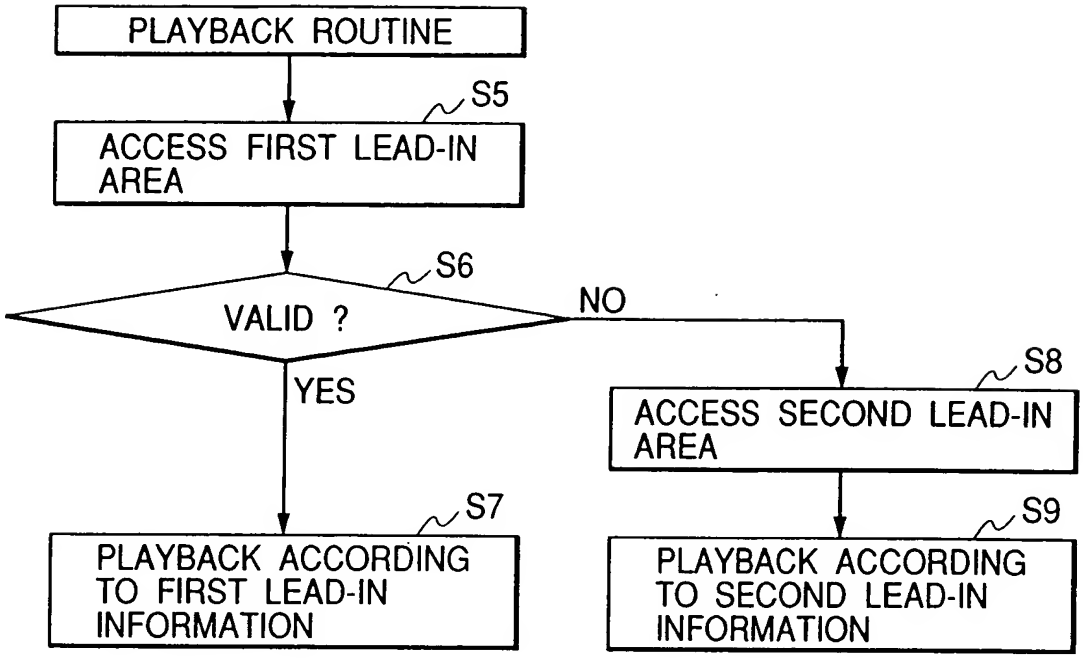

PLAYBACK ROUTINE
S5
ACCESS FIRST LEAD-IN AREA
S6
VALID ?
NO
YES
S8
ACCESS SECOND LEAD-IN AREA
S7
PLAYBACK ACCORDING TO FIRST LEAD-IN INFORMATION
S9
PLAYBACK ACCORDING TO SECOND LEAD-IN INFORMATION

FIG. 14

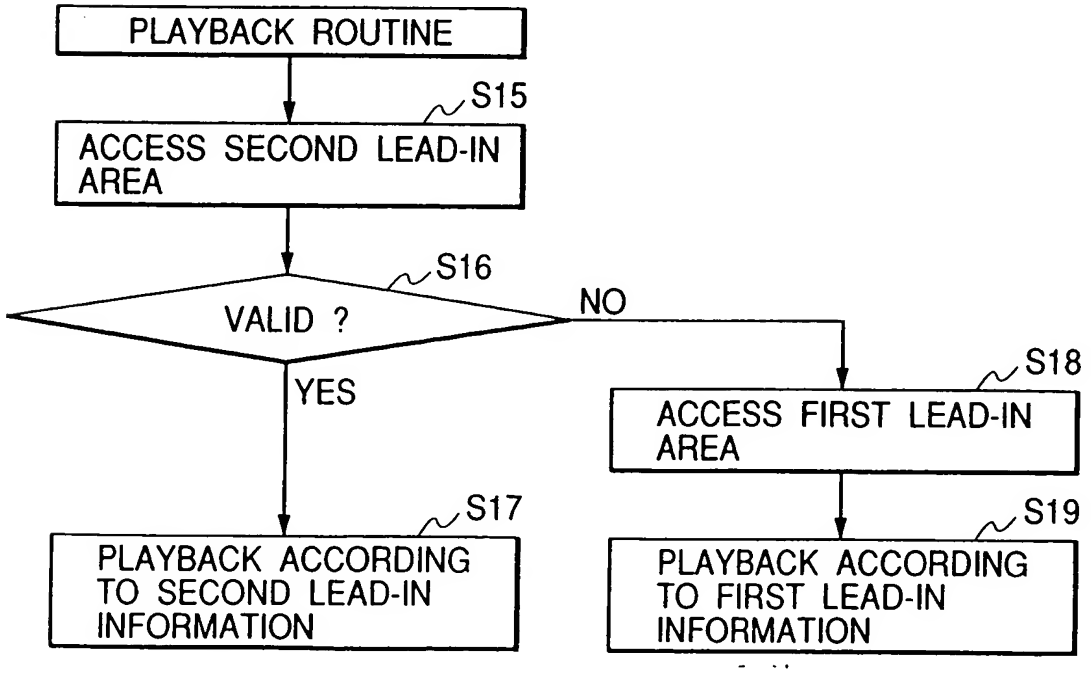

PLAYBACK ROUTINE
S15
ACCESS SECOND LEAD-IN AREA
S16
VALID ?
NO
YES
S18
ACCESS FIRST LEAD-IN AREA
S17
PLAYBACK ACCORDING TO SECOND LEAD-IN INFORMATION
S19
PLAYBACK ACCORDING TO FIRST LEAD-IN INFORMATION

FIG. 15

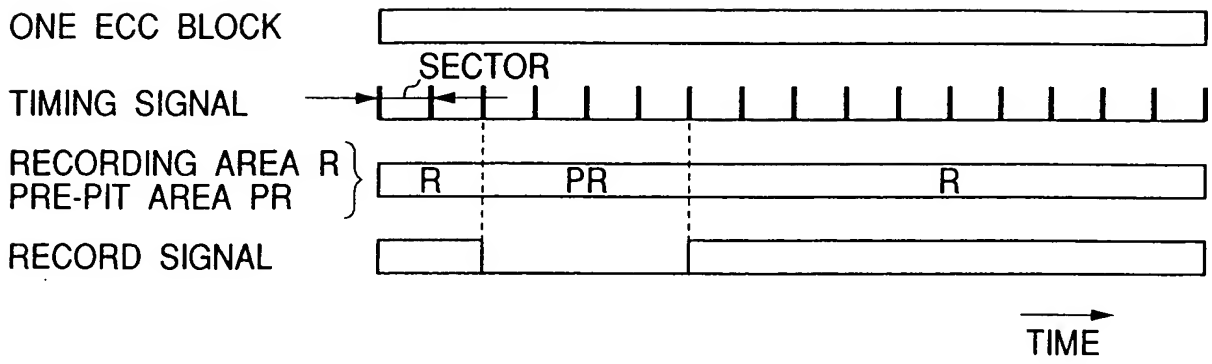
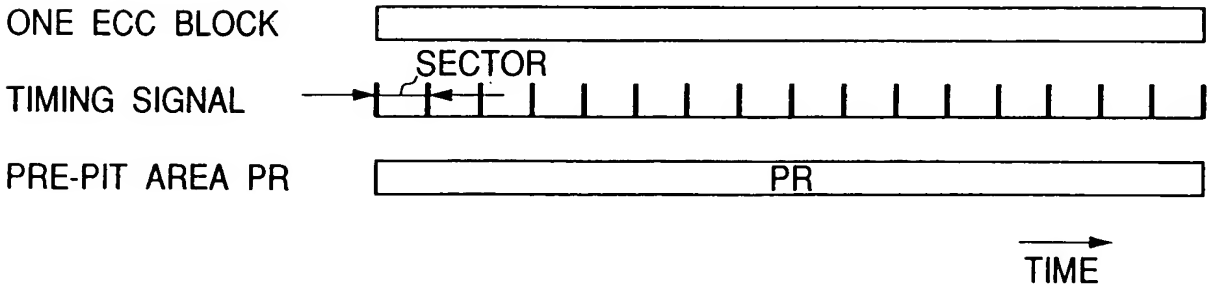

ONE ECC BLOCK
SECTOR
TIMING SIGNAL
RECORDING AREA R
PRE-PIT AREA PR
R
PR
R
RECORD SIGNAL
TIME

FIG. 16


ONE ECC BLOCK
SECTOR
TIMING SIGNAL
PRE-PIT AREA PR
PR
TIME